



மனோன்மணியம் சுந்தரனார் பல்கலைக்கழகம்  
**MANONMANIAM SUNDARANAR UNIVERSITY**

**SYLLABUS FOR DIPLOMA IN DIPLOMA IN BUSINESS ORIENTED  
COMPUTER APPLICATIONS PROGRAM OFFERED THROUGH DIRECTORATE OF  
VOCATIONAL EDUCATION (COMMUNITY COLLEGES AND VOCATIONAL SKILL  
DEVELOPMENT CENTRES) FROM 2019 – 2020**



கல்விசார் நிலைக்குழுக் கூட்டம்

**MEETING OF THE STANDING COMMITTEE ON  
ACADEMIC AFFAIRS HELD ON WEDNESDAY  
THE 22<sup>nd</sup> JANUARY 2020**

## DIPLOMA IN BUSINESS ORIENTED COMPUTER APPLICATIONS

வணிகம் சார் கணினிய பயன்பாடுகள் பட்டயம்

### SCHEME OF EXAMINATION

Subject Code	Title of the Course	Credit	Hours	Passing Minimum
<b>Semester I</b>				
C19BC11/E19BC01	Principles of Accounting	6	90	40/100
C19BC12/E19BC02	Fundamentals of Computer & Programming	6	90	40/100
C19BC13/E19BC03	Office Automation and Page Designing	6	90	40/100
C19CE10/E19CE10	Communicative English	6	90	40/100
C19BCP1/E19BCP1	Practical I-Programming in C++ and Practice on Page Designing	4	120	40/100
<b>Semester II</b>				
C19BC21/E19BC04	Accounting Software And E-Commerce	6	90	40/100
C19BC22/E19BC05	Data Base Programming With Visual Basic & Oracle	6	90	40/100
C19LS23/E19LS05	Life Skill	6	90	40/100
C19BCP2/E19BCP2	Practical II-Practical on Accounting Software, VB and Oracle	4	120	40/100
C19BCPW/E19BCPW	Internship and Project	10	150	40/100

**Eligibility for admission:** Pass in 10<sup>th</sup>std examination conducted by the Govt. of Tamil Nadu Board of Secondary Education, Government of Tamil Nadu or any other equivalent examination.

**Examination:** Passing Minimum for each Course is 40%. Classification will be done on the basis percentage marks of the total marks obtained in all the Courses and as given below:

40 % but less than 50 %	- Third class
50 % but less than 60 %	- Second class
60 % and above	- First class

### Theory Paper

Internal Marks-25

External Marks-75

## **SYLLABUS**

### **Semester I**

Course I	:	Principles of Accounting
Course II	:	Fundamentals of Computer & Programming
Course III	:	Office Automation and Page Designing
Course IV	:	Communicative English
Course V	:	Practical I-Programming in C++ and Practice on Page Designing

### **Semester II**

Course VI	:	Accounting Software and E-Commerce
Course VII	:	Data Base Programming With Visual Basic & Oracle
Course VIII	:	Life Skill
Course IX	:	Practical II-Practical on Accounting Software, VB and Oracle
Course X	:	Internship and Project

**\*(Semester Pattern for Community College Only)**

### **Program Objectives**

- After completion of the one year Diploma in Business Oriented Computer Application course, the outgoing students gets considerable practical knowledge in the application of computer and through which they can handle all kind of activities like programming, designing, reporting, recording the data, manipulating the data, etc. of all kind of business and non-business entities.
- The out comers can get job opportunities in all kind of organizations where ever the management depending computerized reports and supports. They can perform as programmers, Web designers, Document Designers, Data entry operators, office secretary, etc. .
- The out comers will have self confidence to setup their own business of running service oriented entities like, Computer coaching centers, DTP centers, Media advertising service, Page design centers and consultancy services as an entrepreneur to provide employment to unemployed in the society.

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**Semester I**  
**Course I**  
(C19BC11/E19BC01)**Principles of Accounting**

**Objectives**

- Introduces students to the world of accounting and assumes no prior knowledge of the subject area.
- It will be demonstrated how a practical understanding and interpretation of accounting reports and other accounting tools can improve decision-making and value for company stakeholders.

**Unit I**

**18 Hrs**

**Personal Finance:** Consumers – Consumer Protection -Choosing a Career - Tax planning-Budgeting - Banking Services - Plan for Investment - Budget for Essentials – Transportation – House Accommodation – Insurance – Retirement planning

**Financial Accounting for family:** Financial Position Statement – Revenue Budgeting - Capital budgeting -Cash book – Analysis Ledger – Family Financial Reports.

**Unit II**

**18 Hrs**

**Theoretical Framework :** Meaning and Scope of Accounting - Accounting concepts, Principles and Conventions – Accounting terminology – Glossary – Capital and revenue expenditure, Capital and revenue receipts, Contingent assets and contingent liabilities – Accounting Policies – Accounting as a Measurement Discipline – Valuation Principles, Accounting Estimates – Accounting Standards – Concepts and Objectives – Indian Accounting Standards.

**Unit III**

**18 Hrs**

**Accounting Process:** Books of Accounts –Trial Balance – Rectification of Errors. –**Bank**

**Reconciliation Statement – Inventories:** Valuation and keeping.-**Accounting of Depreciation:** Concepts, Methods of computation - method of accounting - treatment for Change in depreciation methods

**Unit IV**

**18 Hrs**

**Accounting for Special Transaction: Bills of exchange and promissory notes:** Meaning – Accounting treatments – Accommodation of bills - **Sale of goods on approval or return basis :** Meaning - accounting treatment. **Consignments** – Meaning and Accounting treatments **.Joint Venture :** Meaning – Methods and Accounting treatment. **Royalty Accounts** – Meaning and Accounting treatments. - **Average Due date and Account Current.-** Meaning & Methods

**Unit V**

**18 Hrs**

**Final Accounts of Sole Proprietors :**Elements of financial statements – Closing Adjustment Entries – Trading Account – Profit and Loss Account and Balance Sheet of Manufacturing and Non-manufacturing entities.

**Reference Books**

- M C S Shukla and R S Grawal, Advanced Accountancy,
- R L Gupta and M Radhaswamy, Advanced Accountancy,
- Arulanantham and Raman, Advanced Accountancy
- S N Maheswari, Advanced Accountancy

## Course II

### (C19BC12/E19BC02) Fundamentals of Computer & Programming

#### Objectives

- The course introduces the concepts of computer basics & Programming with particular attention to business functioning examples.
- The C programming language is used but the course will stress on fundamental parts of programming language, so that the students will have a basic concept for understanding and using other programming language.

#### Unit I

18 Hrs

##### INTRODUCTION TO COMPUTER

Definition - Generation - Classification application - characteristics of computer - number system - data representation - hardware architecture - memory types - Basis functions of a computer - Various operator - Software - Software - system and application software - languages, packages - compiler & interpreters - Microprocessor - Pentium series - operating system fundamentals - Windows 2000

#### Unit II

18 Hrs

Problem solving - concept of machine language - Assemble language - High level programming - Algorithms - Flowcharts - Structure of programming languages - Object Oriented Programming, Variable / constants - data types - operators - expressions - statements - control statements; conditional - loop - breaking control statement - strings handling and manipulation.

#### Unit III

18 Hrs

##### ARRAYS

Single and multidimensional array - Functions : type of functions virtual functions - inline function - friend function - Pointers; pointer declaration - pointers and functions - Structure declaration - Structures and functions

#### Unit IV

18 Hrs

##### CLASSES

Declaration - constructors - destructors - Inheritance : single inheritance - Multiple inheritance I/O streams files: Type of Stream - opening and closing files - input and output operation

#### Unit V

18 Hrs

##### C LANGUAGE:

Data Types, Operators and Expressions: Character set, C identifiers and keywords; variables and constants; basic data type arithmetic, relational, logical and bit-wise operators; increment decrement and ternary operators; typedef, struct, enumerated data types; type conversion.

#### Reference Books:

- Programming with C++ - John R Hubbard, Tata McGraw , Hill & Co.
- Object Oriented Programming with C++ - E Balakurusamy TMH - 2003
- Fundamentals of Computers - 2014 by Rajaraman V, Adabala N

## Course III

### (C19BC13/E19BC03)Office Automation and Page Designing

#### Objectives

- Office tools course would enable the students in crafting professional word documents, excel spread sheets, power point presentations using the Microsoft suite of office tools. To familiarize the students in preparation of documents and presentations with office automation tool
- To create documents and templates, add text into documents using method, and apply different formatting styles to characters and paragraphs in page maker software
- To import graphics, create objects using various tools, add effects to objects in PageMaker
- To create a book and export it into PDF by PageMaker
- To do multipage layout Design by PageMaker
- Students will gain a working knowledge of **Photoshop** and develop their skills in editing and altering photographs for through a basic understanding of the tool bar, layers, and the adjustments panel.
- **CorelDraw** enables students to acquire practical proficiency for work with 2D graphics. Students learn how to use all program features for implementation of their own ideas and projects and for poster presentation of various semester projects. Students learn the process of creative thinking and its ideas implementation, which must never be compromised due to graphic program features and its limits.

#### Unit I

18 Hrs

##### MS WORD

Introduction to word processor – Concept of MS word — toolbars – formatting – spelling & grammar – working with graphics & drawings – animating text – creating and customizing tables– conversion to their formats – newspaper column setting – word wrap pint – prepare envelop, mail merge – printing – page setup – adding header and footer – Bullet and numbering – border and shading table – short cut keys – working with chart – connection with web page

#### Unit II

18 Hrs

##### MS EXCEL

Introduction to worksheet – concept of MS Excel – creating, saving – opening, closing, editing workbooks setup of the page – formula and functions – shortcut keys – cell formatting worksheet – working with graphics – functions- macros – charts – printing.

#### Unit III

18 Hrs

##### PAGE MAKER

Introduction to Page Maker – Page setup – setting up ruler – Guides – new publication – font style, size – master page – creating a redesigned publication – adjusting letter spacing spell checking – indents control palette – duplication and pasting – rotating object – locking objects – aligning objects – objects and control palette – generating table content – using color palette – applying shaping objects – manipulating text blocks – importing files – setting tabs and indents – formatting characters – formatting paragraphs – transforming object learning table editor – execution in menus – submenus.

**Unit IV****18 Hrs****PHOTOSHOP**

Photoshop introduction: Theory on graphic designing, Toolbars-Toolbox - Opening new and Existing File, Screen Modes, Standard Screen Mode, Full Screen Mode with Menu Bar, Creating Document Window -Working with Selections - Transforming a Selection - Setting the Current Foreground and Background Colors through Pen tool - Stationary Items, Advertising Items - Working with color mode - Mastering Layers in Photoshop - Layer Style and Filter Effects - Layer Style and Filter Effects - Automation, 3D and printing in Photoshop

**Unit V****18 Hrs****CORAL DRAW**

Corel Draw Interface - Tool Box - Moving from Adobe Illustrator to Corel Draw - Drawing and Coloring: Selecting Objects - Creating Basic Shapes - .Mastering with Text Introduction - Text Tool - Artistic and paragraph text - Formatting Text - Embedding Objects into text - Wrapping Text around Object - Linking Text to Objects .Applying Effects -: Power of Blends – Distortion - Contour Effects - Envelopes - Lens effects - Transparency - Creating Depth Effects - Power Clips - Working with Bitmap Commands: Introduction - Working with Bitmaps - Editing Bitmaps - Applying effects on Bitmaps - Printing.

**Reference Books:**

- MS Office 2000 for every one – Sanjay Saxena, Vikas Publications
- Page Maker – William B Sanders
- Computer Basics with Office Automation – Archana Kumar
- Photoshop CS6 in Simple Steps – DT Editorial Services
- Corel DRAW Training Guide – Prof. Satish Jain, M Geetha

## **Course IV**

### **(C19CE10/E19CE10)Communicative English**

#### **1. Basic Grammar:**

- a. Review of grammar
- b. Remedial study of grammar
- c. Simple sentence
- d. Word passive voice etc.

#### **2. Bubbling Vocabulary:**

- a. Synonyms
- b. Antonyms
- c. One – work Institution

#### **3. Reading and Understanding English**

- a. Comprehension passage
- b. Précis – writing
- c. Developing a story from hints.

#### **4. Writing English**

- a. Writing Business letters.
- b. Paragraph writing
- c. Essay writing
- d. Dialogue writing

#### **5. Speaking English**

- a. Expressions used under different circumstances
- b. Phonetics

### **Reference**

1. V.H.Baskaran – “English Made Easy”
2. V.H.Baskaran – “English Composition Made Easy”  
(Shakespeare Institute of English Studies, Chennai)
3. N.Krishnaswamy – “Teaching English Grammar”  
(T.R.Publication, Chennai)
4. “Life Skill” – P.Ravi, S.Prabakar and T.Tamzil Chelvam,  
M.S.University, Tirunelveli.



## **Course V Practical I**

### **(C19BCP1/E19BCP1)Programming Skills in C++ and Practice on Page Designing**

#### **Objectives**

- To understand how C++ improves C with object-oriented features.
- To learn how to write inline functions for efficiency and performance.
- To learn the syntax and semantics of the C++ programming language.
- To learn how to design C++ classes for code reuse.
- To learn how to implement copy constructors and class member functions.
- To understand the concept of data abstraction and encapsulation.
- To learn how to overload functions and operators in C++.
- To learn how containment and inheritance promote code reuse in C++.
- To learn how inheritance and virtual functions implement dynamic binding with polymorphism.
- To learn how to design and implement generic classes with C++ templates.
- To learn how to use exception handling in C++ programs.
- To give practice in the lab by providing samples and models of different page designing objects and train to manipulate with PageMaker, Photoshop and CorelDraw software

#### **List of Exercises**

- Write a program to compute the EMT (Equal Monthly Installment) of loan for a fixed period.
- Write a program to read and process the marks & display the result of students.
- Write a program to fix sale target and find out the performance of sales representatives with sales volume.
- Write a program to prepare the sort list for the 10 salesman according to their sales volume.
- Write a program to find the sum and difference of any two numbers by using object creation.
- Prepare a pay roll for the Employees of a company.
- Estimate the total product sales analysis of a day using operator overloading.
- Calculate and find the ration of financial control of business concern
- Prepare a Electricity Bill and calculate based on different tariff.
- Prepare a student mark list by using pointer

## Semester II

### Course VI

#### (C19BC21/E19BC04)Accounting Software and E-Commerce

#### Objectives

- To acquire Competency to enter accounting transactions in the accounting software and have the capability of generating different accounting reports/Documents/records.
- To make cost analysis report, Profit & Loss accounts, Balance sheet and cash flow statements etc.
- To enter all the business transactions in computerized accounting system efficiently.
- To understand the interest and opportunity of e-commerce
- To know how to plan and how to manage e-commerce solutions
- To apply processes of e-commerce and to analyze and understand the human, technological and business environment associated with e-commerce
- To know how to use technologies to build e-commerce websites

#### Unit I

18 Hrs

**Fundamental of Tally ERP 9 :** Functional with Tally –Setting up a company in Tally. ERP 9.

**Account Masters in Tally. ERP 9 :**F11: Features, F 12 Configurations – setting up account

heads.- **Inventory :**Stock groups – stock categories – Godowns/ Locations – Units of Measure – Stock items – Creating inventory masers for National Traders.

#### Unit II

18 Hrs

**Voucher Entry:** Accounting Vouchers – Inventory Vouchers – Invoicing. -

**Advanced Accounting :** Bill-wise details – cost centres and cost categories – voucher class and cost centre class – Multiple currencies – Bank Reconciliation – Interest Calculations – Budgets and Controls – Scenario Management.

#### Unit III

18 Hrs

**Multilingual Capabilities:** Configuring – creating master – entering transactions in multiple languages – Transliteration – Generating reports.

**Technological Advantages:** Tally Vault – Security Control – Tally Audit – Back up and restore – Split company data – Export and Import of Data – ODBC Connectivity – Web enabled, print preview and online help – printing of reports and cheques.

#### Unit IV

18 Hrs

**Tally. NET and Remote Capabilities:** Overview of tally NET – configure tally. NET features – connect company on tally. NET – create remote users – Authorize remote users – remote access.

**Application Management and Controls :** Concept of control centre – Installing and activating tally. ERP 9 – Logging to control centre – managing accounts using control centre.

## **Unit V**

**18 Hrs**

**Introduction to E-commerce:** Introduction. An Overview, Electronic Commerce – Cutting edge, Electronic Commerce Framework. - **Network Infrastructure:** An overview, The Internet Hierarchy, Basic Blocks of e-commerce, Networks layers and TCP/IP protocols. The Advantages of Internet. World Wide Web. **Managing the e-Enterprise:** e- Enterprise. Managing the e-Enterprise, E-business Enterprise, Comparison between conventional design and E-organization, Organisation of Business in an e-Enterprise.

### **Reference book**

- Learn Tally.ERP 9 with GST, by Rajesh Chheda (Author)
- Official Guide to Financial Accounting Using Tally. ERP 9 with GST by Tally Education (Author)
- Technologies Failing to Succeed: The Story of India's First E-Commerce Company” by K Vaitheeswaran
- “E – Commerce: Strategy and Applications”by David Whiteley

## Course VII

### (C19BC22/E19BC05)Data Base Programming With Visual Basic & Oracle

#### Objectives

- This course introduces computer programming using the Visual BASIC programming language with object-oriented programming principles. Emphasis is on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test and debug at a beginning level.
- Oracle
- To enhance the knowledge and understanding of Database analysis and design.
- To enhance the knowledge of the processes of Database Development and Administration using SQL and PL/SQL.
- To enhance Programming and Software Engineering skills and techniques using SQL and PL/SQL.
- To preparation of background materials and documentation needed for Technical Support using SQL and PL/SQL.
- To use the Relational model and how it is supported by SQL and PL/SQL.
- To use the PL/SQL code constructs of IF-THEN-ELSE and LOOP types as well as syntax and command functions.
- To solve Database problems using Oracle 9i SQL and PL/SQL. This will include the use of Procedures, Functions, Packages, and Triggers.
- To have a good experience on understanding of how several fundamental algorithms work, particularly those concerned with creation and updating table.
- To have a good experience on understanding of the fundamentals DBMS used in computer usage.
- To be able to practice on understanding various queries and their execution.

#### Unit I

**18 Hrs**

Introduction to Visual Basic, Creating an application IDE, Forms, Controls variables, writing code in Visual Basic, Working with files.

#### Unit II

**18 Hrs**

Menu, MIDI application, Debugging tools, Common dialog Control, Introduction to Database, working with Data controls, DAO.

#### Unit III

**18 Hrs**

Purpose of Database system-data abstraction data modules – Instance and Scheme – Data independence – DDL (Data Definition Language) - Data Manipulation language – Database use and Database manager – Relational Algebra

**Unit IV****18 Hrs**

Introduction to ORACLE Data base system; Relational Database objects – users and schemas – SQL – Oracle server – Database Administration tools – Creating database Applications – Embedded SQL,PL SQL, Data types – Oracle Database Access – default – concurrent – explicit – multi file connections.

**Unit V****JAVA BASICS****18 Hrs**

Operators – java structure – Main Method – comments – Packages and imports – Naming conflicts and code formatting – Static imports – Understanding Primitive data types – Whole Numeric Primitives – Decimal Numeric Primitives – Declaring And initializing Variables – Understanding default initialization of primitives – Variable scope – Ordering Elements in Class – Understanding Null – Primitive Wrapper Types - Java Benefits.

**Reference Books**

- Professional Visual Basic 6 Databases by Charles Williams
- Visual Basic Oracle 8 Programmer's Reference by Dov Trietsch & Mike Erickson
- Oracle Programming with Visual Basic by Nick Snowdon

## Course VIII

(C19LS23/E19LS05)Life Skill

### I Life Coping or adjustment

- (a) External and internal influence in one's life
- (b) Process of coping or adjustment
- (c) Coping with physical change and sexuality
- (d) Coping with stress, shyness, fear, anger far live and criticism.

### II Attitude

- (a)Attitude
- (b)Self acceptance, self – esteem and self actualization
- (c)Positive thinking

### III Problem Solving

- (a) Goal Setting
- (b) Decision Making
- (c) Time Management and stress Management.

### IV Computers

- (a) Introduction to Computers
- (b) M.S.Office
- (c) Power Point

### V Internet

- (a) Introduction to internet
- (b) E – mail
- (c) Browsing

### **References**

- 1) Life Skill Programme course I & II by Dr. Xavier Alphona MCRDCE Publications. R.K.Mutt Road, Chennai – 28
- 2) ஆளுமை பண்பு வளர்த்தல் மற்றும் தகவல் தொடர்பு by M.Selvaraj Community College,Palayamkottai
- 3) “Life Skill” –P.Ravi, S.Prabahar & T.Tamil Chelvam, M.S. University, Tirunelveli

## Course IX

### Practical II (C19BCP2/E19BCP2) Practical on Accounting Software, Visual Basic and Oracle

#### Objectives

- To improve practical work at lab to generate Accounting and inventory Masters, vouchers and basic reports in tally
- To practice on understanding of Advanced accounting and inventory system in Tally ERP9
- To practice on understanding the importance and usefulness of Job costing and job order processing
- Practice on the utility of Multilingual Capabilities, Remote Access and Security features tool management of Tally.
- To practice the understanding of basic concept and practical application of Advance Tax, GST and TDS.

#### VISUAL BASIC

1. Design Arithmetic calculator.
2. Menu creation with simple file and edit option
3. Prepare the electricity bill and allow the discount for different Categories.
4. Create database for getting business reports.
5. Calculate the sales commission for sales
6. Develop payroll for ABC company
7. Search particulars of specified customer form the date base
8. VB program for conducting test with objective type questionnaire
9. VB application to design a analog clock
10. VB application to open a text file display the content on a text box using coming dialog control.

#### ORACLE

1. Create table for a supermarket
2. List and view the tables.
3. Select the content of data based on Quarries using SQL
4. Create a view for the table 'emp' (assume your own fields)
5. Update the table " emp" with specific conditions Increase the salary (10%) for all managers.

#### TALLY

##### 1. ACCOUNTING

Accounting is the main key feature of Tally and that is what it is known for. The main thought that comes in mind of a person when hearing about tally is accounting

##### 2. BILLING

Billing is an inevitable part of any business and its care is duly taken by Tally. Actually billing is included in accounting feature but it has some what a separate function rather than accounting. The best thing in Tally is what when you create a billing entry you did not have to create accounting entry for that bill.

### **3. TALLY EXERCISE**

Setting Opening balance sheet and opening stock of a Trading Company in the tally software and entering one month data of the company and generate the following one month report:

- a) Trial Balance for the month ended 30<sup>th</sup> April 2019
- b) Trading and Profit & Loss Account for the month ended 30<sup>th</sup> April 2019
- c) Balance Sheet as on 30<sup>th</sup> April 2
- d) Cash Flow statement for the month April 2019
- e) Stock report as on 30<sup>th</sup> April 2019



## Course X

### (C19BCPW/E19BCPW) Internship and Project

#### Objectives

- The internship provides a variety of benefits for outcomes who want to broaden their changes for landing a job and jump-starting their careers. Internships the outcomes a taste of what a profession is like, help them in their career.
- Enhance the knowledge of each student in the area of study.
- Enrich the professional skills by giving more exposure to practical work experience
- Increase the potential of students by working on real time projects
- Ensure industry level training with the detailed syllabus framed as per current industry requirements

#### Area of Skill application:

##### a) Page design:

Graphic design internship- projects that focus on nearly every aspect of a business's visual design strategies - creating graphic and video content-template design - web design work, and many more exciting tasks in industries that best matches the students' career goals.

##### b) Data Entry Operation:

Data entry is the act of entering information into electronic formats by using word processing or accounting data processing software hosted on a computer and it's data entry operators who perform these tasks. Though "data entry" sounds technical, students can get many of these jobs with no previous experience. In fact, beginner-level jobs in the data entry field are available even for those with no previous experience.

##### c) Jr. Software Developer

A front-end development intern with a fundamental understanding of full-cycle web development and passion for great design, user experience and site usability is the requirement of Software development organisation. A successful candidate will possess fluency with CSS, HTML and JavaScript.

##### d) E-Commerce

This E-commerce Internship will involve working with Ecommerce Team and contribute to seasonal assortment and customer experience. Everyday will be very unique with projects ranging from vendor outreach, proposed product assortments, brand research, customer service and site improvements.

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